



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/543,101	05/22/2006	Michael Alculumbre	24068	5462
24932      7590      08/31/2007 LAUBSCHER & LAUBSCHER, P.C. 1160 SPA ROAD SUITE 2B ANNAPOLIS, MD 21403				
EXAMINER				
JOHNSON, STEPHEN				
ART UNIT		PAPER NUMBER		
3641				
MAIL DATE		DELIVERY MODE		
08/31/2007		PAPER		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

# Office Action Summary

**Application No.**

10/543,101

**Applicant(s)**

ALCULUMBRE ET AL.

**Examiner**

Stephen M. Johnson

**Art Unit**

3641

**Period for Reply** -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 20 June 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-8, 10, 11, 13, 14 and 17 is/are rejected.
- 7) ☒ Claim(s) 9, 12, 15 and 16 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/S508)
- Paper No(s)/Mail Date \_\_\_\_\_

- 4) ☐ Interview Summary (PTO-413)
- Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

Art Unit: 3641

1. The replacement drawings filed on 6/20/2007 have been approved.
2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1-8, 10, and 13 are rejected under 35 U.S.C. 102(b) as being anticipated by Lohmann (236).

Lohmann (236) discloses a small arm projectile comprising:

- |  |                                       |
|--|---------------------------------------|
| a) a warhead;  | 10                                    |
| b) an explosive charge;  | D                                     |
| c) an initiator;   | 19; B                                 |
| d) a firing pin;   | E                                     |
| e) safe position of initiator;   | see fig. 1                            |
| f) armed position of initiator;  | see fig. 3                            |
| g) shielding means and associated guide means;                         | 18; groove in 10 that accommodates 18 |
| h) safe position of shutter;   | see fig. 1                            |
| i) armed position of shutter;  | see fig. 3                            |
| j) shielding means slideable in response to movement of initiator; and | col. 4, lines 39-75                   |
| k) initiator engaging means.   | A                                     |

4. Applicant's arguments are addressed as follows.

It is argued that claim limitations directed to “a small arms projectile for a small arms weapon” are not met by Lohmann. In response, note that the claim limitations directed to “for a small arms weapons” are directed to intended usage and therefor are not limiting. Further, there is no reason the projectile of Lohmann could not be used with small arms or would be capable of usage with small arms. Note that Lohmann specifically states usage with “any given weapon” (see col. 1, lines 39-41 of Lohmann). Further, just because a weapon is situated on or attached to an aircraft does not disqualify the weapons from being a small arms weapon. With regards to the issue of a “small arms projectile”, note that this limitation is directed to the title of the claim and therefore is also not limiting to the claim language. Further, applicant has not specified any particular size limitations directed to his projectile and consequently there is no way to determine whether any projectile including the projectile of Lohmann would qualify as a small arms projectile. Note that claim limitations directed to a small arms projectile should be directed to features of the projectile rather than an intended usage with a particular type of arms.

It is further argued that the function, size, and complexity of the timing device would make it unsuitable for small arms usage. In response, the features directed to function and complexity are presumably those listed in applicant’s claim body. Since, Lohmann has met these claim limitations, it must be suitable for small arms usage since clearly applicant’s invention is directed to small arms usage. With regard to the issue of size, this feature has not been claimed and as such need not be present in Lohmann.

It is further argued that the carrier member 18 of Lohmann moves to the armed condition in response to the shearing charge rupturing sequential delay primer A. In response, note that the carrier member 18 (“shielding means”) cannot move to the position illustrated in fig. 3 until the

carrier member 19 (“initiator”) has moved to the position illustrated in fig. 2 (see col. 4, lines 38-75 of Lohmann). The shearing charge rupture is nearly a feature of the Lohmann projectile that delays the movement of the carrier member 18 after the carrier member 19 has arrived at the position illustrated in fig. 2.

It is further argued that carrier member 18 does not moves into position until a predetermined amount of time has expired. This is accurate. However, the time delay is not initiated until carrier member 19 (“initiator”) has moved to the position illustrated in fig. 2 (see col. 4, lines 43-49 of Lohmann). Therefore the carrier member 18 (“shielding means”) does slide to the armed position is response to the initiator (carrier member 19) moving from the safe to the armed condition (compare positions of carrier member 19 in figs. 1 and 2). It just does so in a delayed fashion.

With regard to the issue of the initiator and shielding means **moving to the armed positions simultaneously**, note that such a feature is not claimed. With regard to the issue of the Lohmann device being less reliable, although this feature is arguable and depends on the reliability of what portion or function of the device is intended, this feature is also unclaimed.

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over Lohmann (236) in view of Blain et al. (287).

Lohmann (236) applies as previously recited. However, undisclosed in a fuse plate component composed of titanium. Blain et al. (287) teach a fuse plate component composed of titanium (col. 14, lines 10-16). Applicant is substituting one material type for another in an analogous art setting as explicitly encouraged by the secondary reference (see col. 14, lines 10-16 of Blain et al.) with expected or predictable results. It would have been obvious to a person of ordinary skill in this art at the time of the invention to apply the teachings of Blain et al. to the Lohmann projectile and have a projectile with a different material type of shielding plate.

7. Applicant's arguments are addressed as follows. It is argued that Blain et al. is not directed to small arms projectiles. In response, the issue of small arms has already been addressed in paragraph 4 above. It is further argued that the technical areas of fuses and rocket section separation are not sufficiently related to applicant's invention to be relevant. In response, note that applicant's invention is in fact a projectile fuse because it delays the actuation of the device until both the initiator 102 and the shutter 106 are in the armed position. Further, both Lohmann and Blain et al. are directed to components used in shielding explosive devices. As such the materials used in these references would be considered to be relevant to one of ordinary skill in this art.

8. Claims 1-8, 10-11, and 13-14 are rejected under 35 U.S.C. 102(b) as being anticipated by Jasse (463).

Jasse (463) discloses a small arm projectile comprising:

- |                         |        |
|-------------------------|--------|
| a) a warhead;           | 1      |
| b) an explosive charge; | E      |
| c) an initiator;        | 15, 23 |

d) a firing pin;	A
e) safe position of initiator;	see fig. 1
f) armed position of initiator;	see fig. 4
g) shielding means and associated guide means;	59, 11
h) safe position of shutter;	see fig. 1
i) armed position of shutter;	see fig. 4
j) shielding means slideable in response to movement of initiator; and	compare figs. 1, 4
k) initiator engaging means.	24

9. Applicant's arguments are addressed as follows.

It is argued that claim limitations directed to "a small arms projectile for a small arms weapon" are not met by Jasse. In response, note that the claim limitations directed to "for a small arms weapons" are directed to intended usage and therefor are not limiting. Further, there is no reason the projectile of Jasse could not be used with small arms or would be capable of usage with small arms. Note that Jasse specifically states usage with a gun (see col. 1, lines 20-24 of Jasse). Further, just because a weapon is situated on or attached to an aircraft does not disqualify the weapons from being a small arms weapon. With regards to the issue of a "small arms projectile", note that this limitation is directed to the title of the claim and therefore is also not limiting to the claim language. Further, applicant has not specified any particular size limitations directed to his projectile and consequently there is no way to determine whether any projectile including the projectile of Jasse would qualify as a small arms projectile. Note that claim limitations directed to a small arms projectile should be directed to features of the projectile

rather than an intended usage with a particular type of arms. It is further argued that Jasse specifically states launch without gun effect. In response, note that Jasse also specifically states “fired from a flying machine, **with or without gun effect**” (see col. 1, lines 20-24 of Jasse).

It is further argued that the function, size, and complexity of the timing device would make it unsuitable for small arms usage. In response, the features directed to function and complexity are presumably those listed in applicant’s claim body. Since, Jasse has met these claim limitations, it must be suitable for small arms usage since clearly applicant’s invention is directed to small arms usage. With regard to the issue of size, this feature has not been claimed and as such need not be present in Jasse.

Applicant makes arguments directed to how the Jasse device would function if the detonator 62 has not moved into the appropriate position to activate the device. In response, Jasse is being relied upon in the embodiment where the device functions as intended where the detonator has moved to the proper actuation position. It is further argued that the Jasse primer 23 can be activated at any time in both the safe and armed positions. This is not accurate. In the safe position (illustrated in fig. 1) the striker pin 49 is prevented from contacting the primer 23 via the intervention of retaining balls 57 and 27. Thus the position of the primer 23 in fig. 1 is the safe position of the primer. The armed position or condition of the primer 23 is illustrated in fig. 4. It is argued that the slide 59 does not move in response to the primer 23 moving to the armed condition since the primer is already armed. This argument is not accurate. The primer 23 moves from the safe position (see fig. 1) to the armed position (see fig. 4). In so doing, it permits the slide 59 to be released and move to its armed position or condition as illustrated in fig. 4. With regard to the argument that the pin 49 and primer 23 are aligned and adjacent to one another in



fig. 1 and therefor the primer could be detonated. This argument ignores the essential function of release balls 57 and 27 to permit movement of the firing pin 49 relative to the primer 23.

10. Claims 9, 12, and 15-16 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

11. Applicant's arguments filed on 6/20/2007 have been fully considered but they are not persuasive. These arguments have been addressed in the preceding paragraphs.

12. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Stephen M. Johnson whose telephone number is 571-272-6877 and whose e-mail address is ([Stephen.Johnson@uspto.gov](mailto:Stephen.Johnson@uspto.gov)). The examiner can normally be reached on Tuesday through Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Carone can be reached on 571-272-6873. The Central FAX phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 800-786-9199.

/Stephen M. Johnson/  
Primary Examiner, Art Unit 3641

Stephen M. Johnson  
Primary Examiner  
Art Unit 3641

SMJ  
August 30, 2007